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09/944,063	08/30/2001	Christopher R. Mitchell	17524-728	8326
21971	7590	11/17/2003	EXAMINER	
WILSON SONSINI GOODRICH & ROSATI 650 PAGE MILL ROAD PALO ALTO, CA 943041050			LEE, SHUN K	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/944,063	<b>Applicant(s)</b> MITCHELL ET AL.	
	<b>Examiner</b> Shun Lee	<b>Art Unit</b> 2878	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 8/30/01 & IDS(2/14/02, 4/30/02, 4/14/03).

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-58 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-58 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \*   c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____
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## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.
2. The information disclosure statement filed 30 April 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but some of the information referred to therein has not been considered.

### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:
  - (a) reference characters "32" and "52" have both been used to designate flange;
  - (b) reference characters "38" and "58" have both been used to designate detector;
  - (c) reference characters "40" and "54" have both been used to designate optics;
  - (d) reference characters "45" and "52" have both been used to designate light emitted; and

- (e) reference characters "80" and "90" have both been used to designate radiation source.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are also objected to as failing to comply with 37 CFR 1.84(p)(4) because:

- (a) reference character "42" has been used to designate both excitation light and light source;
- (b) reference character "44" has been used to designate both filter and fiber optic bundle; and
- (c) reference character "52" has been used to designate both flange and light emitted.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are further objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

26. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. In addition, the drawings are objected to because in Fig. 5, reference character "54" (which is described in the specification as optics 54; pg. 13, lines 22-25) appears to be pointing to emission light and reference character "56" (which is described in the specification as emission light 56; pg. 13, lines 22-25) appears to be pointing to the optics. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

8. The abstract of the disclosure is objected to because of the language. Correction is required. See MPEP § 608.01(b).

9. The disclosure is objected to because of the following informalities: "For example, different types of light sources that may be used to generate the excitation energy include, but are not limited to a line generator, holographic optic, rotating prism, cold cathode fluorescent lamp (CCFL), cylindrical lens and a row of light emitting

diodes" on pg. 13, lines 29-32 is contradicted by "In one embodiment, a diode laser is used in combination with an optical system, such as a line generator, which converts the pencil beam native to the diode laser into a uniform line" on pg. 11, lines 26-28.

Thus it is unclear how optical systems (*e.g.*, a line generator) are light sources that may be used to generate the excitation energy. Appropriate correction is required.

### ***Claim Objections***

10. Claims 13 and 14 are objected to because of the following informalities:

- (a) in claim 13, "the platform" on line 2 should probably be --a platform-- (there is insufficient antecedent basis for this limitation in the claim); and
- (b) in claim 14, "the platform" on line 2 should probably be --a platform-- (there is insufficient antecedent basis for this limitation in the claim).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 7, 8, 37, and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "optimized" in claims 7, 8, 37, and 38 is a relative term which renders the claim indefinite. The term "optimized" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further,

the term "minimized" in claims 8 and 38 is a relative term which renders the claim indefinite. The term "minimized" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Thus in claims 7 and 37, one of ordinary skill in the art would not be reasonably apprised of the amount of light detection at the emission wavelength that distinguishes an optimized sensor array from an unoptimized sensor array. Similarly in claims 8 and 38, one of ordinary skill in the art would not be reasonably apprised of the minimum amount of excitation wavelength and infrared sensitivity that distinguishes an optimized sensor array from an unoptimized sensor array. Therefore, claims 7, 8, 37, and 38 are vague and indefinite.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1-5, 15-26, 31-35, 43-51, 54, 55, 57, and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Isoda *et al.* (US 6,326,636).

In regard to claim 1, Isoda *et al.* disclose (Fig. 8) an apparatus for reading a latent image stored on a storage layer radiation screen (50), the apparatus comprising:

- (a) a light source (11) adapted to provide excitation light across a width of a storage layer radiation screen (50); and
  - (b) an excitation and image acquisition station comprising a mechanism (12) for shaping the excitation light as an elongated region of excitation light (L) across the width of the screen (50), optics (16) for collecting a region of light emitted by a lateral strip of the screen (50) excited by the elongated region of excitation light (L), and an elongated pixelated sensor array (20) positioned to capture from the optics (16) the region of light emitted by the screen (50);
- wherein the latent image stored on the screen (50) is read by collecting and capturing light (M) emitted from the screen (50) as the screen (50) moves past the excitation and image acquisition station.

In regard to claim **31**, the method steps are implicit for the apparatus of Isoda *et al.* since the structure is the same as the applicant's apparatus of claim 1.

In regard to claims **2** and **3** (which are dependent on claim 1) and claims **32** and **33** (which are dependent on claim 31), Isoda *et al.* also disclose (column 3, lines 51-61; column 7, lines 41-50; column 47, lines 48-64) that the elongated pixelated sensor array is a  $m \times n$  array where  $m \geq 1$  and  $n > 1$ .

In regard to claims **4** and **5** (which are dependent on claim 1) and claims **34** and **35** (which are dependent on claim 31), Isoda *et al.* also disclose (column 3, lines 51-61; column 47, lines 48-64) that the elongated pixelated sensor array comprises an array of  $m \times n$  pixels where  $m \geq 1$  and  $n$  is at least 1000 (*e.g.*, 2048).



In regard to claim **15** (which is dependent on claim 1) and claim **43** (which is dependent on claim 31), Isoda *et al.* also disclose (column 92, line 62 to column 94, line 25) that the light source is a broad band light source.

In regard to claim **16** (which is dependent on claim 15) and claim **44** (which is dependent on claim 43), Isoda *et al.* also disclose (column 92, line 62 to column 94, line 25; column 99, lines 50-53) that a filter is employed with the broad band light source which removes light that does not fall within a wavelength range of an absorption spectrum of the screen.

In regard to claim **17** (which is dependent on claim 1) and claim **45** (which is dependent on claim 31), Isoda *et al.* also disclose (column 7, lines 6-15) that the excitation light contacting the screen comprises the wavelength range of 650 to 680 nanometers.

In regard to claim **18** (which is dependent on claim 1) and claim **46** (which is dependent on claim 31), Isoda *et al.* also disclose (column 3, line 62 to column 4, line 49) that the light source comprises a member of the group consisting of a line generator, holographic optic, rotating prism, cold cathode fluorescent lamp, cylindrical lens and a row of light emitting diodes.

In regard to claims **19** and **20** (which are dependent on claim 1) and claims **47-49** (which are dependent on claim 31), Isoda *et al.* also disclose (column 3, line 62 to column 4, line 49) that the excitation and image acquisition station excites a lateral strip of the screen so that the excitation light across the width of the screen have a width of 10  $\mu\text{m}$  to 4000  $\mu\text{m}$  (e.g., <60  $\mu\text{m}$ ) at any instant.

In regard to claims **21** and **23** (which are dependent on claim 1) and claim **50** (which is dependent on claim 31), Isoda *et al.* also disclose (column 3, line 62 to column 4, line 49) that the excitation and image acquisition station comprises a flange which functions to narrow a width of the region of excitation light formed across the width of the screen and to create a sharp leading edge of the excitation light.

In regard to claim **22** (which is dependent on claim 1) and claim **51** (which is dependent on claim 31), Isoda *et al.* also disclose (column 3, line 62 to column 4, line 49) that the excitation and image acquisition station comprises a cylindrical lens which functions to sharpen the focus of the excitation light.

In regard to claim **24** which is dependent on claim 1, Isoda *et al.* also disclose (column 4, lines 50-59) that the optics of the excitation and image acquisition station comprises an array of gradient index fibers.

In regard to claim **25** which is dependent on claim 1, Isoda *et al.* also disclose (column 96, lines 52-58) that the optics of the excitation and image acquisition station comprises an array of gradient index fibers, the array being at least 2 fibers wide in the direction which the screen is moved.

In regard to claim **26** which is dependent on claim 1, Isoda *et al.* also disclose (column 96, lines 52-58) that the optics of the excitation and image acquisition station comprises an array of gradient index lenses, the array being at least 3 lenses wide in the direction which the screen is moved.

In regard to claim **54** which is dependent on claim 31, Isoda *et al.* also disclose (column 92, line 62 to column 94, line 25) that the excitation light comprises multiple wavelengths of light within an absorption spectrum of the screen.

In regard to claim **55** which is dependent on claim 31, Isoda *et al.* also disclose (column 92, line 62 to column 94, line 25) that the excitation light comprises multiple wavelengths of light between 600 nm and 700 nm.

In regard to claim **57** which is dependent on claim 31, Isoda *et al.* also disclose (column 5, lines 27-38) that the pixelated sensor array can be read out more quickly than an integration time (charge accumulation period) of the pixelated sensor array.

In regard to claim **58** which is dependent on claim 31, Isoda *et al.* also disclose (column 4, lines 60-67) filtering light from the optics prior to the light contacting the pixelated sensor array so that only light emitted by the screen contacts the pixelated sensor array.

### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 6-12 and 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isoda *et al.* (US 6,326,636) in view of Van Uffel (US 2001/0017356).

In regard to claim **6** (which is dependent on claim 1) and claim **36** (which is dependent on claim 31), while Isoda *et al.* also disclose (column 3, lines 51-61) that the elongated pixelated sensor array is comprised of a CCD image sensor or the like, the apparatus and method of Isoda *et al.* lacks an explicit description that the elongated pixelated sensor array is a CMOS sensor array. However, elongated pixelated sensor arrays such as CMOS sensor arrays are well known in the art. For example, Van Uffel teaches (paragraph 0028) that an elongated pixelated sensor array comprises arrays such as a CMOS sensor array. Therefore it would have been obvious to one having ordinary skill in the art to provide one of the known equivalent sensor arrays (e.g., a CMOS sensor array) as the elongated pixelated sensor array in the apparatus and method of Isoda *et al.*

In regard to claims **7** and **8** (which are dependent on claim 1) and claims **37** and **38** (which are dependent on claim 31), Van Uffel is applied as in claims 6 and 36 above. The apparatus and method of Isoda *et al.* lacks an explicit description that the elongated pixelated sensor array is optimized for detection of light at the emission wavelength and optimized such that its sensitivity to the excitation wavelength and infrared is minimized.

However, Isoda *et al.* also disclose (column 89, lines 5-27; Fig. 41) that providing an elongated pixelated sensor array with a high quantum efficiency in a wavelength range which corresponds to the stimuable phosphor sheet emission wavelength range allows markedly enhanced emitted light utilization efficiency so as to obtain good quality images. Therefore it would have been obvious to one having ordinary skill in the art to optimize the elongated pixelated sensor array in the apparatus and method of Isoda *et al.*, in order to obtain a high elongated pixelated sensor array quantum efficiency in a wavelength range which corresponds to the stimuable phosphor sheet emission wavelength range so as to enhanced emitted light utilization efficiency and obtain good quality images.

In regard to claims **9-11** (which are dependent on claim 1) and claims **39-41** (which are dependent on claim 31), Isoda *et al.* also disclose (column 3, lines 51-61; column 7, lines 41-50; column 16, line 51 to column 17, line 9; column 47, lines 48-64) that the excitation and image acquisition station comprises at least two sensor arrays positioned in parallel with each other, at least one of which serving as the elongated pixelated sensor array, the region of light collected by the optics being focused upon at least one of the two sensor arrays. In addition, Van Uffel is applied as in claims 6 and 36 above.

In regard to claim **12** (which is dependent on claim 1) and claim **42** (which is dependent on claim 31), Isoda *et al.* also disclose (column 4, lines 60-67) that the excitation and image acquisition station further comprising a filter which filters light other

than light emitted by the screen from the sensor array. In addition, Van Uffel is applied as in claims 6 and 36 above.

18. Claims 13, 14, 27, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isoda *et al.* (US 6,326,636) in view of Ohta *et al.* (US 4,780,767).

In regard to claims **13** and **14** which are dependent on claim 1, while Isoda *et al.* also disclose (column 5, lines 46-59) relative motion between a screen and an excitation and image acquisition station, the apparatus of Isoda *et al.* lacks that the mechanism for causing the screen to move relative to a platform is a roller assembly or a belt. However, mechanisms for relative motion between a screen and an excitation and image acquisition station are well known in the art. For example, Ohta *et al.* teach (Fig. 2) that the mechanism for causing the screen (A) to move relative to a platform (38) is a roller assembly or a belt (rollers 30, 34 rotated by a belt; column 9, lines 5-12). Therefore it would have been obvious to one having ordinary skill in the art to provide a relative motion mechanism (*e.g.*, a roller assembly or a belt) in the apparatus of Isoda *et al.*, in order to move the screen to relative to a platform.

In regard to claim **27**, Isoda *et al.* is applied as in claim 1 and Ohta *et al.* is applied as in claims 13 and 14 above.

In regard to claim **52** which is dependent on claim 31, while Isoda *et al.* also disclose (column 5, lines 46-59) relative motion between a screen and an excitation and image acquisition station, the method of Isoda *et al.* lacks that the screen is moved past the excitation light by moving the screen over a surface of a platform. However, mechanisms for relative motion between a screen and an excitation and image

acquisition station are well known in the art. For example, Ohta *et al.* teach (Fig. 2) that the mechanism for causing the screen (A) to move relative to a platform (38) is a roller assembly or a belt (rollers 30, 34 rotated by a belt; column 9, lines 5-12). Therefore it would have been obvious to one having ordinary skill in the art to provide a relative motion mechanism (e.g., a roller assembly or a belt) in the method of Isoda *et al.*, in order to move the screen to relative to a platform.

19. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isoda *et al.* (US 6,326,636) in view of Ohta *et al.* (US 4,780,767) and Struye *et al.* (US 5,998,802).

In regard to claims **29** and **30**, Isoda *et al.* is applied as in claims 1-5 and Ohta *et al.* is applied as in claims 13 and 14 above. While Isoda *et al.* also disclose (column 5, lines 46-59) relative motion between a screen and an excitation and image acquisition station, the apparatus of Isoda *et al.* lacks that the latent image stored on the screen is read by capturing light emitted from the screen as the screen moves past the excitation and image acquisition station in a step-and-repeat mode or a time-delay integration mode. However, capturing light emitted from the screen as the screen moves past the excitation and image acquisition station is well known in the art. For example, Struye *et al.* teach (column 1, line 16 to column 2, line 4; column 7, lines 7-14) that capturing light emitted from the screen as the screen moves past the excitation and image acquisition station occurs in a step-and-repeat mode or a time-delay integration mode. Therefore it would have been obvious to one having ordinary skill in the art that the CCD camera in the apparatus of Isoda *et al.* is operated in a known mode (e.g., a

step-and-repeat mode or a known time-delay integration mode), in order to capture light emitted from the screen as the screen moves past the excitation and image acquisition station.

20. Claims 28 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isoda *et al.* (US 6,326,636) in view of Hosoi *et al.* (US 4,926,045).

In regard to claim **28**, Isoda *et al.* is applied as in claim 1. While Isoda *et al.* also disclose (column 5, lines 46-59) relative motion between a screen and an excitation and image acquisition station, the apparatus of Isoda *et al.* lacks that the excitation and image acquisition station is positioned adjacent a rotatable drum on which the screen may be positioned and the latent image stored on the screen is read by collecting and capturing light emitted from the screen as the rotatable drum rotates and causes the screen to move past the excitation and image acquisition station. However, mechanisms for relative motion between a screen and an excitation and image acquisition station are well known in the art. For example, Hosoi *et al.* teach (column 26, line 30 to column 27, line 4; Fig. 17) that the latent image stored on a screen is read by collecting and capturing light emitted from the screen as a rotatable drum rotates and causes the screen to move past the excitation and image acquisition station. Therefore it would have been obvious to one having ordinary skill in the art to provide a relative motion mechanism (e.g., a rotatable drum) in the method of Isoda *et al.*, in order to move the screen to relative to the excitation and image acquisition station.

In regard to claim **53** which is dependent on claim 31, Hosoi *et al.* is applied as in claim 28 above.



21. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isoda *et al.* (US 6,326,636) in view of Heffelfinger (US 5,266,803).

In regard to claim **56** which is dependent on claim 31, the method of Isoda *et al.* lacks that the pixelated sensor array has a dynamic range of at least 4000:1. However, sensors for reading screens are well known in the art. For example, Heffelfinger teaches (column 2, line 34-42; column 9, line 21-30; column 10, line 44-53) to obtain 16-bit signals from a photodiode or photomultiplier scanning sensor in order to read storage phosphors having an inherent dynamic range on the order of  $10^5$  and higher. Therefore it would have been obvious to one having ordinary skill in the art to provide a pixelated sensor array having a dynamic range of at least 4000:1 in the method of Isoda *et al.*, in order to read storage phosphors having an inherent dynamic range on the order of  $10^5$  and higher.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 6,621,094 (Yasuda) discloses an apparatus and method for reading a latent image stored on a storage layer radiation screen with a line sensor.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shun Lee whose telephone number is (703) 308-4860. The examiner can normally be reached on Monday-Thursday.

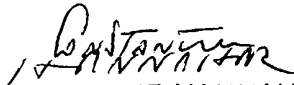
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (703) 308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SL  
November 5, 2003

  
CONSTANTINE HANNAHER  
PRIMARY EXAMINER  
GROUP ART UNIT 2878